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10/082,874	02/26/2002	Tomas Dicz	02-171	4966

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EXAMINER

VO, HUYEN X

ART UNIT	PAPER NUMBER
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2626

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06/18/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/082,874

Applicant(s)

DIEZ ET AL.

Examiner

Huyen X. Vo

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 22-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 22-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's arguments filed 4/3/2007 have been fully considered but they are not persuasive.
2. With respect to applicant's arguments regarding the two modules are not "located far apart" (*fourth paragraph on page 7*), Tamura teaches an indoor unit controller (2) having a microphone for receiving user's speech commands (*see abstract*). It is well known that the HVAC device is placed on the outside of the building. Since the unit controller is placed indoor while the HVAC device is placed outdoor, the two devices/modules/systems are located far apart.
3. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless – (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 15-17 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Tamura (JP 4327748, from IDS).

6. Regarding claim 15, Tamura further discloses a control module for controlling a heating, ventilating, or air conditioning (HVAC) system, comprising:

a speech receiving member for receiving speech commands (*microphone 3 in figure 6; also referring to English abstract*);

a converter for converting said speech commands to HVAC system instructions (*referring to English abstract; voice recognizer outputs various kinds of control signals*);
and

a transmitter for transmitting said HVAC system instructions to said HVAC system (*abstract, control signal is sent to the receiver 22 to control the HVAC system*).

an indicator member for identifying a received speech command (*abstract, to inform operator whether input speech command is recognized or not recognized*);

a storage member for storing known speech patterns and corresponding indicators (*inherent in the a speech recognizer 6 in figure 6, any speech recognizer must include predefined speech models*), wherein said converter is adapted to compare said received speech command with said known speech patterns and to output an

Art Unit: 2626

indicator corresponding to said received speech command, and wherein said indicator member is a speech simulator and said corresponding indicators are signals for generating speech (*an inherent functionality of a speech recognizer 6 in figure 6, any speech recognizer must include predefined speech models for comparing with input speech command to determine a match*).

7. Regarding claims 16-17, Tamura further discloses the apparatus of claim 15, wherein said transmitter is a wireless transmitter (*referring to English abstract or figure 6, recognizer issues HVAC instructions, which are transmitted to remote module 1 to control the HVAC system*), wherein said transmitter is a wireless transmitter selected from the group consisting of light-based transmitters and radio transmitters (*wireless communication between module 1 and module 2 in figure 6*).

8. Regarding claim 22, Tamura further discloses the apparatus according to claim 15, wherein said storage member also stores commands for generating the HVAC system instructions corresponding to said known speech patterns whereby said control module acknowledges said received speech command and transmits corresponding the home appliance instructions (*referring to abstract, speech recognizer issues instruction upon recognizing input speech command*).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-4, 7-8, 10, and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tamura (JP 4327748, from IDS) in view of ESI Engineering Publication.

11. Regarding claim 1, Tamura discloses a control system for a heating, ventilating or air conditioning (HVAC) system, comprising:

a remote command receiver for receiving instructions for said HVAC system
(*element 2 in figure 6 and also referring to abstract*); and

a control module, comprising:

(i) a speech receiving member for receiving speech commands (*microphone 3 for receiving speech command in figure 6 and also referring to abstract*); and

(ii) a converter for converting said speech commands to HVAC system instructions (*referring to English abstract; voice recognizer outputs various kinds of control signals*); wherein said control module is communicated with said remote command receiver for conveying said HVAC system instructions from said control module to said remote command receiver (*abstract, control signal is sent to the receiver 22 to control the HVAC system*);

said control module is positioned relative to said component outside of said noise zone (*referring to figure 6 and/or English abstract; two modules are located far apart, unit controller are located indoor while the HVAC is obviously located outdoor*).

Tamura fails to specifically disclose wherein said heating, ventilation or air conditioning system includes an HVAC component which generates a noise zone wherein operating noise of said component is greater than 60 dB A. However, ESI Engineering teaches an HVAC component which generates a noise zone wherein operating noise of said component is greater than 60 dB A (*Table on the first page, right column*).

Since Tamura and ESI Engineering are analogous art because they are from the same field of endeavors it would have been obvious to one of ordinary skill in the art at the time of invention to modify Tamura by incorporating the teaching of ESI Engineering in order able technician to install control module outside of the noise zone to prevent noise from corrupting input speech commands to improve speech recognition accuracy.

12. Regarding claims 2-4, Tamura further discloses the control system of claim 1, wherein said control module further comprises a transmitter for transmitting said HVAC system instructions to said remote command receiver (*referring to English abstract or figure 6, recognizer issues HVAC instructions, which are transmitted to remote module 1 to control the HVAC system*), wherein said transmitter is a wireless transmitter, and said remote command receiver is a wireless receiver (*wireless communication between*

module 1 and module 2 in figure 6), wherein said transmitter and said remote command receiver are communicated by wireless communication selected from the group consisting of light-based communication (wireless communication between module 1 and module 2 in figure 6).

13. Regarding claims 7-8, Tamura further discloses the system of claim 1, wherein said control module further comprises an indicator member for identifying a received speech command (*abstract, to inform operator whether input speech command is recognized or not recognized*), and wherein said control module further comprises a storage member for storing known speech patterns and corresponding indicators (*inherent in the a speech recognizer 6 in figure 6, any speech recognizer must include predefined speech models*), and wherein said control module is adapted to compare said received speech command with said known speech patterns and to output an indicator corresponding to said received speech command (*inherent in the a speech recognizer 6 in figure 6, any speech recognizer must include predefined speech models for comparing with input speech command to determine a match*).

14. Regarding claim 10, Tamura further discloses the system according to claim 8, wherein said storage member also stores commands for generating the HVAC system instructions corresponding to said known speech patterns whereby said control module acknowledges said received speech command and transmits corresponding the home

appliance instructions (*referring to abstract, speech recognizer issues instruction upon recognizing input speech command*).

15. Regarding claim 24, Tamura further discloses the apparatus of claim 15, wherein said control module is positioned relative to said component outside of said noise zone (*referring to figure 6 and/or English abstract; two modules are located far apart*).

Tamura fails to specifically disclose that the heating, ventilation or air conditioning system includes an HVAC component, which generates a noise zone wherein operating noise of said component is greater than 60 dB A. However, ESI Engineering teaches an HVAC component which generates a noise zone wherein operating noise of said component is greater than 60 dB A (*Table on the first page, right column*).

Since Tamura and ESI Engineering are analogous art because they are from the same field of endeavors it would have been obvious to one of ordinary skill in the art at the time of invention to modify Tamura by incorporating the teaching of ESI Engineering in order able technician to install control module outside of the noise zone to prevent noise from corrupting input speech commands to improve speech recognition accuracy.

16. Regarding claim 25, Tamura further discloses a method for operating a system according to claim 1 to control a heating, ventilating or air conditioning (HVAC) component, comprising the steps of:

positioning said control module outside said noise zone (*modules 1 and 2 in figure 6 are located far apart*);

receiving a speech command at said control module (*referring to English abstract*);

converting said speech command to HVAC system instructions at said control module (*referring to English abstract*); and

sending said HVAC system instructions from said control module to said component (*referring to English abstract*).

Tamura fails to specifically disclose providing said heating, ventilation or air conditioning component which generates a noise zone wherein operating noise of said component is greater than 60 dB A. However, ESI Engineering teaches providing said heating, ventilation or air conditioning component which generates a noise zone wherein operating noise of said component is greater than 60 dB A (*table in the first page, right column*).

Since Tamura and ESI Engineering are analogous art because they are from the same field of endeavors it would have been obvious to one of ordinary skill in the art at the time of invention to modify Tamura by incorporating the teaching of ESI Engineering in order able technician to install control module outside of the noise zone to prevent noise from corrupting input speech commands to improve speech recognition accuracy.

17. Claims 5-6, 9, and 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tamura (JP 4327748, from IDS) in view of ESI Engineering Publication, and further in view of Bush et al. (US 6397186).

18. Regarding claims 5-6, Tamura fails to specifically disclose the system according to claim 2, wherein said transmitter and said remote command receiver are communicated by light-based and/or infrared communications. However, Bush et al. teach that said transmitter and said remote command receiver are communicated by light-based and/or infrared communications (*col. 8, lines 1-62*).

Since Tamura and Bush et al. are analogous art because they are from the same field of endeavors it would have been obvious to one of ordinary skill in the art at the time of invention to modify Tamura by incorporating the teaching of Bush et al. in order to provide effective communications between module 1 and module 2 to control the HVAC system.

19. Regarding claim 9, Tamura fail to specifically disclose the system of claim 8, wherein said indicator member is a speech simulator and said corresponding indicators are signals for generating speech. However, Bush et al. teach that said indicator member is a speech simulator and said corresponding indicators are signals for generating speech (*col. 31, lines 54-67*).

Since Tamura and Bush et al. are analogous art because they are from the same field of endeavors it would have been obvious to one of ordinary skill in the art at the time of invention to modify Tamura by incorporating the teaching of Bush et al. in order to audibly confirm to the user if the input speech command recognized so that user would know what action to take.

20. Regarding claim 11, Tamura fails to specifically disclose the system of claim 1, wherein said control module further comprises a neural network adapted to train said control module for receiving personalized speech commands, and a storage member for storing personalized speech data and corresponding HVAC system instructions. However, Bush et al. teach that the control module further comprises a neural network adapted to train said control module for receiving personalized speech commands, and a storage member for storing personalized speech data and corresponding HVAC system instructions (*col. 10, line 47 to col. 11, line 7*).

Since Tamura and Bush et al. are analogous art because they are from the same field of endeavors it would have been obvious to one of ordinary skill in the art at the time of invention to modify Tamura by incorporating the teaching of Bush et al. in order to improve speech recognition accuracy.

21. Regarding claims 12, Tamura fails to specifically disclose the system according to claim 1, wherein said control module further comprises a base member adapted for supporting said module on a flat surface. However, Bush et al. teach that said control module further comprises a base member adapted for supporting said module on a flat surface (*figure 3*).

Since Tamura and Bush et al. are analogous art because they are from the same field of endeavors it would have been obvious to one of ordinary skill in the art at the time of invention to modify Tamura by incorporating the teaching of Bush et al. in order to protect electronic components that make up the system.

22. Regarding claim 13, Tamura fails to specifically disclose the system according to claim 12, wherein said control module further comprises a plug member for connecting to an AC power source and an AC-DC transformer for supplying DC power to said control module. However, Bush et al. teach that said control module further comprises a plug member for connecting to an AC power source and an AC-DC transformer for supplying DC power to said control module (*col. 9, lines 13-19*).

Since Tamura and Bush et al. are analogous art because they are from the same field of endeavors it would have been obvious to one of ordinary skill in the art at the time of invention to modify Tamura by incorporating the teaching of Bush et al. in order to provide power for the system.

23. Regarding claim 14, Tamura fails to specifically disclose the system according to claim 12, wherein the speech receiving member comprises a multi-directional microphone. However, Bush et al. teach that the speech receiving member comprises a multi-directional microphone (*col. 7, lines 33-52*).

Since Tamura and Bush et al. are analogous art because they are from the same field of endeavors it would have been obvious to one of ordinary skill in the art at the time of invention to modify Tamura by incorporating the teaching of Bush et al. in order to obtain a stronger speech command signal while minimizing introduction of unwanted noise.

24. Claims 18 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tamura (JP 4327748, from IDS) in view of Bush et al. (US 6397186).

25. Regarding claim 18, Tamura fails to specifically disclose the apparatus of claim 15, wherein said transmitter is an infrared transmitter. However, Bush et al. teach a infrared transmitter (*col. 8, lines 1-62*).

Since Tamura and Bush et al. are analogous art because they are from the same field of endeavors it would have been obvious to one of ordinary skill in the art at the time of invention to modify Tamura by incorporating the teaching of Bush et al. in order to provide effective communications between module 1 and module 2 to control the HVAC system.

26. Regarding claim 23, Tamura fails to specifically disclose the apparatus of claim 15, further comprising a neural network adapted to train said control module for receiving personalized speech commands, and a storage member for storing personalized speech data and corresponding HVAC system instructions. However, Bush et al. teach that the control module further comprises a neural network adapted to train said control module for receiving personalized speech commands, and a storage member for storing personalized speech data and corresponding HVAC system instructions (*col. 10, line 47 to col. 11, line 7*).

Since Tamura and Bush et al. are analogous art because they are from the same field of endeavors it would have been obvious to one of ordinary skill in the art at the

time of invention to modify Tamura by incorporating the teaching of Bush et al. in order to improve speech recognition accuracy.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huyen X. Vo whose telephone number is 571-272-7631. The examiner can normally be reached on M-F, 9-5:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2626

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HXV

6/4/2007


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